

Application No. 09/814,034
Attorney Docket No: 25061A

IN THE CLAIMS

1 – 16 (Canceled)

17. (Currently Amended) A composition suitable for use as a component in a binder for fiberglass, comprising:

a polyacrylic acid having a weight-average molecular weight ranging from 1,000 to 10,000 polymerized from an acrylic acid monomer in the presence of a phosphorus based regulating agent to form a phosphite regulated polyacrylic acid, said regulating agent being suitable for use as an accelerating agent in a subsequent reaction step, and crosslinked by a polyhydroxy crosslinking agent, wherein a molar ratio of hydroxyl groups in said polyhydroxy crosslinking agent to carboxylic acid groups in said polyacrylic acid ranges from 0.4 – 0.6.

18. (Previously Presented) The composition of claim 17, wherein said phosphorus based regulating agent comprises a constituent selected from the group consisting of sodium hypophosphite, sodium phosphite, potassium phosphite, disodium pyrophosphate, tetrasodium pyrophosphate, sodium tripolyphosphate, sodium hexametaphosphate, potassium phosphate, potassium polymetaphosphate, potassium polyphosphate, potassium tripolyphosphate, sodium trimetaphosphate, sodium tetrametaphosphate and mixtures thereof.

19. (Previously Presented) The composition of claim 18, wherein said phosphorus based regulating agent is selected from the group consisting of sodium hypophosphite, sodium phosphite and mixtures thereof.

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20. (Canceled)
21. (Canceled)
22. (Currently Amended) The composition of claim 17, wherein said weight-average molecular weight is between 2,000 and 6,000.
23. (Previously Presented) The composition of claim 17, wherein said polyhydroxy crosslinking agent is selected from the group consisting of glycerol, triethanolamine, trimethylolpropane, 1,2,4-butanetriol, ethyleneglycol, 1,3-propanediol, 1,4-butanediol, 1,6-hexanediol, pentaerythritol, sorbitol and mixtures thereof.
24. (New) The composition of claim 17, further comprising a hydrolyzed silane coupling agent.
25. (New) The composition of claim 24, wherein said hydrolyzed silane coupling agent is present in an amount of from 0.01 to 10 wt % based upon the weight of said composition suitable for use as a binder component.
26. (New) The composition of claim 17, further comprising a mineral oil dust suppressing agent.

27. (New) The composition of claim 26, wherein said mineral oil dust suppressing agent is present in an amount up to 20 wt % based upon the weight of said composition suitable for use as a binder component.

28. (New) The composition of claim 17, further comprising an adjuvant selected from the group consisting of dyes, oils, fillers, thermal stabilizers, flame retardants, lubricants and mixtures thereof.

29. (New) A composition suitable for use as a binder for fiberglass consisting essentially of:

a polyacrylic acid having a weight-average molecular weight of from 1,000 to 10,000 polymerized from an acrylic acid monomer in the presence of a phosphorus based regulating agent to form a phosphite regulated polyacrylic acid, said regulating agent being suitable for use as an accelerating agent in a subsequent reaction step, and crosslinked by a polyhydroxy crosslinking agent selected from the group consisting of triethanolamine, glycerol, trimethylolpropane, 1,2,4,-butanetriol, ethyleneglycol, 1,3-propanediol, 1,4-butanediol, 1,6-hexanediol, pentaerythritol, sorbitol and mixtures thereof.

30. (New) The composition of claim 29, wherein said weight-average molecular weight is between 2,000 and 6,000.

31. (New) The composition of claim 29, wherein said phosphorus based regulating agent comprises a constituent selected from the group consisting of sodium hypophosphite, sodium phosphite, potassium phosphite, disodium pyrophosphate, tetrasodium pyrophosphate,

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sodium tripolyphosphate, sodium hexametaphosphate, potassium phosphate, potassium polymetaphosphate, potassium polyphosphate, potassium tripolyphosphate, sodium trimetaphosphate, sodium tetrametaphosphate and mixtures thereof.

32. (New) The composition of claim 31, wherein said phosphorus based regulating agent is selected from the group consisting of sodium hypophosphite, sodium phosphite and mixtures thereof.

33. (New) The composition of claim 29, wherein a molar ratio of hydroxyl groups in said polyhydroxy crosslinking agent to carboxylic acid groups in said polyacrylic acid ranges from 0.4 – 0.6.